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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/510,652	02/22/2000	Ralf Bohnke	450117-02428	1553

20999 7590 09/16/2003

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EXAMINER

DEPPE, BETSY LEE

ART UNIT PAPER NUMBER

2634

DATE MAILED: 09/16/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/510,652

Applicant(s)

BOHNKE ET AL.

Examiner

Betsy L. Deppe

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2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 July 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-16 and 18-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5,7,8,14-16,18,20 and 21 is/are rejected.
- 7) ☒ Claim(s) 6,9-13,19 and 22-26 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 February 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 18 July 2003 is: a) ☒ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

1. This Office Action is in response to the amendment filed July 19, 2003.

Drawings

2. The replacement sheet for the drawings was received on July 18, 2003. This sheet is acceptable.

3. Figure 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to because the elements in Figures 13 and 14 should be labeled so that one viewing the drawings may understand the subject matter of the claimed invention without referring to the detailed description. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

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6. Claims 1-3 and 14-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Ballarin et al. (EP 0 702 467 A1, cited in the IDS filed February 22, 2000, Paper No. 4). Ballarin et al. discloses a receiving means and a synchronising means comprising a cross correlation means (30A) wherein there are at least two repetition patterns (AB and CD) whereby one of the repetition patterns is phase-shifted in relation to another repetition pattern. (See Figures 1, 2 and 4; page 2, lines 2-13; and page 3, lines 3-24 and 29-51) Figure 4 of Ballarin et al. discloses using the complex conjugate of the expected repetition pattern.

Claim Rejections - 35 USC § 103

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

8. Claims 5, 8, 18, and 21 rejected under 35 U.S.C. 103(a) as being unpatentable over Ballarin et al.

9. With regard to claims 5 and 18, Ballarin et al. discloses the claimed invention except for a correlation length corresponding to the length of one repetition pattern. Since Ballarin et al. discloses that the reference sequence may be short to restrict the necessary hardware (see page 3, lines 52-53), it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a window length of one

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repetition pattern in order to achieve get more precise synchronization while conserving hardware.

10. With regard to claims 8 and 21, Ballarin et al. discloses the claimed invention except for a cross correlation window length corresponding to the length of two repetition patterns. Since Ballarin et al. discloses that the reference sequence may be short to restrict the necessary hardware (see page 3, lines 52-53), it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a window length of two repetition patterns in order to achieve get more precise synchronization while conserving hardware.

11. Claims 7 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ballarin et al. as applied to claims 5 and 18, respectively, above, and further in view of Nakajima et al. (US Patent No. 5,005,144 cited in the Office Action mailed April 17, 2003, Paper No. 10). Ballarin et al. discloses the claimed invention except for an averaging means for smoothing an output signal. Nakajima et al. discloses an averaging means (36) using a moving average method to smooth a correlation signal. (See Figure 3 and column 4, lines 22-58)

It would have been obvious to one of ordinary skill in the art at the time the invention was made add an averaging means to Ballarin in order to improve system performance.

Allowable Subject Matter

12. Claims 6, 9-13, 19 and 22-26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Betsy L. Deppe whose telephone number is (703) 305-

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4960. The examiner can normally be reached on Monday, Tuesday and Friday (8:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on (703) 305-4714.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.



Betsy L. Deppe
Primary Examiner
Art Unit 2634
September 12, 2003